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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
DANIELSEN, NATHAN ANDREW	
ART UNIT	**PAPER NUMBER**
2627	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/808,922	AKAHOSHI ET AL.	
	Examiner	Art Unit	
	Nathan Danielsen	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-16 are pending.

Claim Objections

2. Claims 6 and 12 are objected to because "can not" should be changed to --cannot--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3-6, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osakabe, in view of Fennema et al (US Patent 5,425,013; hereinafter Fennema).

Regarding claims 1 and 13, Osakabe discloses an optical disk apparatus (and associated method) (figures 1 and 5) for recording data on a recordable optical disk having a power calibration area on a radially inner side (figure 3; note also the mirror area 18), comprising:

a laser diode for emitting a laser beam (inherent in element 36 in figure 5);

a laser diode driver module for driving said laser diode (element 40 in figure 5);

an objective lens for constricting the laser beam (inherent in element 36 in figure 5);

objective lens driving means for driving said objective lens in a radial direction of said recordable optical disk (inherent in element 48 in figure 5); and

control means for controlling said laser diode driver module and said objective lens driving means (element 46 in figure 5),

wherein said control means controls said objective lens driving means such that an area to be irradiated with the laser beam is located on a radially inner side beyond the power

calibration area while controlling said laser diode driver module for emitting the laser beam (inherent in ¶ 35 for emitting a light of an appropriate power to reproduce the bar code 50 in figure 6).

However, Osakabe fails to disclose where said control means controls said objective lens driving means such that an area to be irradiated with the laser beam is located on a radially inner side beyond the power calibration area while controlling said laser diode driver module for emitting the laser beam *for the purpose of adjusting laser power*.

In the same field of endeavor, Fennema discloses where said control means controls said objective lens driving means such that an area to be irradiated with the laser beam is located on a radially inner side beyond the power calibration area while controlling said laser diode driver module for emitting the laser beam *for the purpose of adjusting laser power* (col. 3, lines 7-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have calibrated the power of an emitted laser beam while making use of an area on a radially inner side beyond the power calibration area, as taught by Fennema, for the purpose of preventing the calibration results from being skewed by a non-constant reflection signal (col. 3, lines 17-25).

Regarding claim 3, Osakabe, in view of Fennema, discloses everything claimed, as applied to claim 1. However, Osakabe fails to disclose where said objective lens driving means is operable to cause said objective lens to seek a location close to a radially innermost periphery of the power calibration area and subsequently move said objective lens more radially inwardly than the power calibration area.

In the same field of endeavor, Fennema discloses where said objective lens driving means is operable to cause said objective lens to seek a location close to a radially innermost periphery of the power calibration area and subsequently move said objective lens more radially inwardly than the power calibration area (col. 3, lines 7-38; where the mirror area 18 is, relative to the size of all regions in figure 3 of Osakabe, close to and more radially inward than the PCA area 22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have moved the pickup in whichever direction is necessary to find the mirror region, as

taught by Fennema, for the purpose of preventing the calibration results from being skewed by a non-constant reflection signal (col. 3, lines 17-25).

Regarding claims 4 and 5, Osakabe, in view of Fennema, discloses everything claimed, as applied to claim 1. Additionally, Osakabe discloses where said objective lens driving means includes a slider for roughly moving said objective lens and a tracking coil for finely moving said objective lens, wherein upon moving said objective lens radially inwardly beyond the power calibration area, said objective lens is roughly moved by using said slider and thereafter said objective lens is finely moved by means of said tracking coil (¶ 32).

Regarding claim 6, Osakabe, in view of Fennema, discloses everything claimed, as applied to claim 1. Additionally, Osakabe discloses where the area located radially inwardly of the power calibration area and destined for irradiation with the laser beam is an area in which data cannot be recorded (¶ 26).

5. Claims 2 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osakabe, in view of Fennema, and further in view of Yoshikawa (US Patent 4,734,914).

Regarding claims 2 and 15, Osakabe, in view of Fennema, discloses everything claimed, as applied to claims 1 and 13, respectively. However, Osakabe, in view of Fennema, fails to disclose where irradiation with the laser beam is performed without aligning a focal point of said objective lens with a recordable surface of the optical disk.

In the same field of endeavor, Yoshikawa discloses where irradiation with the laser beam is performed without aligning a focal point of said objective lens with a recordable surface of the optical disk (col. 3, lines 38-51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have defocused the laser beam of Osakabe and Fennema, as taught by Yoshikawa, for the purpose of producing a stable laser output of a particular level (col. 2, lines 23-26).

6. Claims 7, 9-12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osakabe, in view of Fennema and Wang et al (US Patent Application Publication 2002/0110065; hereinafter Wang).

Regarding claims 7 and 14, Osakabe discloses an optical disk apparatus (and associated method) (figures 1 and 5) for recording data on a recordable optical disk having a power calibration area(figure 3; note also the mirror area 20), comprising:

a laser diode for emitting a laser beam (inherent in element 36 in figure 5);

a laser diode driver module for driving said laser diode (element 40 in figure 5);

an objective lens for constricting the laser beam (inherent in element 36 in figure 5);

objective lens driving means for driving said objective lens in a radial direction of said recordable optical disk (inherent in element 48 in figure 5); and

a control circuit for controlling said laser diode driver module and said objective lens driving means (element 46 in figure 5),

wherein said control means controls said objective lens driving means such that an area to be irradiated with the laser beam is located on a side beyond the power calibration area while controlling said laser diode driver module for emitting the laser beam (inherent in ¶ 35 for emitting a light of an appropriate power to reproduce the bar code 50 in figure 6).

However, Osakabe fails to disclose where the power calibration area is located on a radially outer peripheral side and where said control circuit controls said objective lens driving means such that an area to be irradiated with the laser beam is located on a radially outer side beyond the power calibration area while controlling said laser diode driver module for emitting the laser beam *for the purpose of adjusting laser power*.

In the same field of endeavor, Wang discloses a power calibration area located on a radially outer peripheral side (element 48 in figure 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the optical disk of Osakabe with the layout of the disk of Wang, for the purpose of obtaining optimum recording powers for the entire disk (¶s 6 and 7). However, Wang also fails to disclose the specific details of how the control circuit operates.

In the same field of endeavor, Fennema discloses where said control circuit controls said objective lens driving means such that an area to be irradiated with the laser beam is located on a radially

outer side beyond the power calibration area while controlling said laser diode driver module for emitting the laser beam *for the purpose of adjusting laser power* (suggested by col. 3, lines 7-38; where the disc of Osakabe has a mirror portion located on a radially outer side beyond the lead-out area, as modified by Wang).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have calibrated the power of an emitted laser beam while making use of an area on a radially outer side beyond the power calibration area, as taught by Fennema, for the purpose of preventing the calibration results from being skewed by a non-constant reflection signal (col. 3, lines 17-25).

Regarding claim 9, Osakabe, in view of Fennema and Wang, discloses everything claimed, as applied to claim 7. However, Osakabe fails to disclose where said objective lens driving means is operable to cause said objective lens to seek a location close to a radially outermost periphery of the power calibration area and subsequently move said objective lens more radially outwardly beyond the power calibration area.

In the same field of endeavor, Fennema discloses where said objective lens driving means is operable to cause said objective lens to seek a location close to a radially outermost periphery of the power calibration area and subsequently move said objective lens more radially inwardly than the power calibration area (col. 3, lines 7-38; where the mirror area 20 is, relative to the size of all regions in figure 3 of Osakabe as modified by Wang, close to and more radially outward than the lead-out area 28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have moved the pickup in whichever direction is necessary to find the mirror region, as taught by Fennema, for the purpose of preventing the calibration results from being skewed by a non-constant reflection signal (col. 3, lines 17-25).

Regarding claims 10 and 11, Osakabe, in view of Fennema and Wang, discloses everything claimed, as applied to claim 7. Additionally, Osakabe discloses where said objective lens driving means includes a slider for roughly moving said objective lens and a tracking coil for finely moving said objective lens, wherein upon moving said objective lens radially outwardly beyond the power calibration area, said

objective lens is roughly moved by using said slider and thereafter said objective lens is finely moved by means of said tracking coil (¶ 32).

Regarding claim 12, Osakabe, in view of Fennema and Wang, discloses everything claimed, as applied to claim 7. Additionally, Osakabe discloses where the area located radially outwardly of the power calibration area and destined for irradiation with the laser beam is an area in which data cannot be recorded (¶ 26).

7. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osakabe, in view of Fennema and Wang, and further in view of Yoshikawa.

Regarding claims 12 and 16, Osakabe, in view of Fennema and Wang, discloses everything claimed, as applied to claims 7 and 14, respectively. However, Osakabe, in view of Fennema and Wang, fails to disclose where irradiation with the laser beam is performed without aligning a focal point of said objective lens with a recordable surface of the optical disk.

In the same field of endeavor, Yoshikawa discloses where irradiation with the laser beam is performed without aligning a focal point of said objective lens with a recordable surface of the optical disk (col. 3, lines 38-51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have defocused the laser beam of Osakabe and Fennema, as taught by Yoshikawa, for the purpose of producing a stable laser output of a particular level (col. 2, lines 23-26).

Response to Arguments

8. Applicant's arguments, see pages 6-9, filed 14 March 2007, with respect to the rejection(s) of claim(s) 1-16 under 35 U.S.C. §§ 102(b) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Osakabe, Fennema, Wang, and Yoshikawa.

Closing Remarks/Comments

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Danielsen whose telephone number is (571) 272-4248. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:00 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Danielsen
05/22/2007

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